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Towards the Tree of Subclass Chonotrichia (Ciliophora)

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Chonotrichs (subclass Chonotrichia) are sessile, uncontractile, unloricate ciliates, epibiontic (with one exception) on representatives of different taxa of marine and freshwater crustaceans. The subclass is divided into two orders, Exogemmida and Cryptogemmida, based on the mode of budding. Chonotrichia is a poor molecular investigates taxon; about 110 species enter into the composition of subclass to date.

There are a few papers in which the questions of origin and divergent evolution of the group were generally discussed in terms of light microscopy. At the same time, molecular data on Chonotrichia exist only for three species (*Spirochona gemmipara*, *Isochona* sp., and *Chilodochona carcini*).

The new material was collected by first co-author from: 1) Roscoff (Brittany, France) – *Heliochona alternans* (from gills of *Gammarella* sp.), *Kentrochona nebaliae* (from thoracopods of *Nebalia bipes*), and *Stylochona nebalina* (from bristles of mandibular palp of *N. bipes*); and 2) from the river La Dullive (Switzerland) – *Spirochona gemmipara* (from gills of *Gammarus* sp.). The SSU sequences (ca 2’100 bp) of these four species were obtained.

Hence, the preliminary phylogenetic tree shows that Chonotrichia is monophyletic group sister to the order Dysteriida; the dysteriid closest to Chonotrichia is representative of family Hartmannulidae; the genus *Chilodochona* occupies a basal position regard to other chonotrich; the separation of orders Exogemmida and Cryptogemmida is supported with the molecular data existing actually: the Cryptogemmida derived from Exogemmida, whereas the genus *Isochona* is the basal group for Cryptogemmida. Our data suggest that the chonotrich genus *Chilodochona* occupies a basal position regard to other chonotrich taxa, which, in turn, agree with data on the comparative morphology of trophonts and swarmers of these ciliates. However, these results require confirmation based on analyses of any representatives of the chonotrich from other families, especially from family Lobochonidae.

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